FIGURES OF UNCERTAINTY

By Erik Van Daele

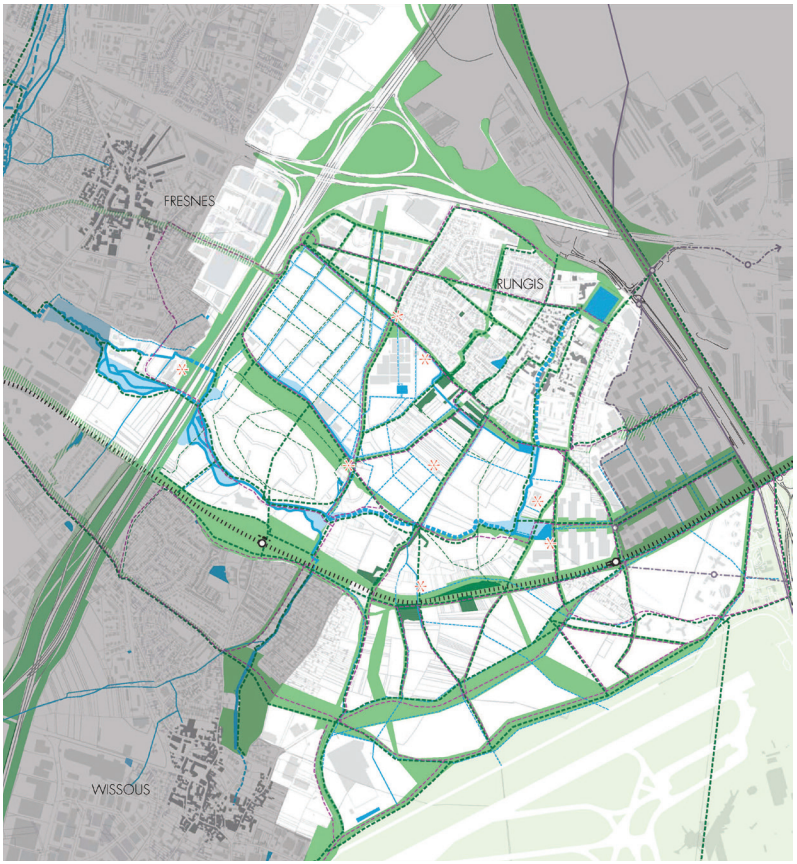
A state of uncertainty is inherent to urban design. Urban designs work on the long term projecting a desired future on different levels: spatial, programmatic, functional, social, ecological, infrastructural... Urbanism works slow to implement this future. At the same time the process of urban development is confronted with a hyper dynamic context of ever changing constraints on the short term: changes in programs, political objectives, cultural and social claims, regional infrastructural projects, etc. As a result consistent parts of an urban project are developed at different speeds. Some projects are at verge of being constructed before the urban designer is involved. The architecture is not yet constructed but the virtual project already works as a constraint in the future plan as the project achieved political and social consensus. On the midterm stakeholders launch ambitious projects, however without designer or location. Although these projects are limited to an ambition and a vague program they have to be taken into account to get a political consensus over the project. Finally on the long-term regional projects are launched, often infrastructural projects, of which the exact trajectory is not yet decided, leaving the choice between several alternative configurations. Furthermore the spatial impact of these regional projects is unclear. Yet the urban design has to show the flexibility to integrate all of the envisaged scenarios.
In this way the evolution of a territory increasingly becomes the addition of specific projects each with their own time frame and lacking any form of coherence. It seems as if urban designers are currently the last to be involved in the evolution of a territory. They no longer lay out the framework in which specific initiatives will be integrated. On the contrary they seem to be running behind the facts trying to combine the different interests at play in the territory by superimposing a coherent long-term framework on the short and mid term decisions. In this conflict between fast and slow evolutions, between a coherent project and the sum of private initiatives, the conventional master plan no longer works as planning tool. The plan graphic of a conventional master plan not only determines the layout of the open spaces and the volumetric composition of the project, it also decides on the envisaged programs. As a result this plan figure is too focused on the layout of an end result leaving no opening or margin for unexpected changes what so ever. Therefore the master plan is not fit to answer constantly changing constraints and contexts.

Although urban design operates in an uncertain context of slow and fast evolutions it is precisely uncertainty that evokes creativity and alertness in the urban design. Designers are forced to constantly find new ways to address different time paths, different interests and initiatives while ensur-

ing a qualitative evolution of the territory on the long term. A challenge that urban designers have to address, if not their designs become irrelevant and obsolete. The innovative character of this search to combine extreme flexibility on the short term and coherence on the long term becomes clear in experiments with plan graphics or plan figures . Plan figures are the most important tool to communicate an urban strategy. They are condensed ways of presenting and discussing the qualities and potentials of the possible evolution of a territory. In order to be an efficient tool of communication for designers, politicians, civil servants, inhabitants and others, the figures used should be evident and convincing. Furthermore the plan figure should remain efficient the moment the initial designers are no longer involved in the process. As the project works on the long-term, designers may come and go while it is not beneficial to the territorial evolution to start the design process all over with every change in the team.
In this way developing and creating new plan figures is a project in itself. How to avoid the rigidity of the master plan where every line, every volume, every point and every trace are read and considered as a final decision?

The open character of a plan figure incorporating change and dynamics depends on the type of uncertainty it is dealing with. Three cases developed by design office uapS illustrate the relation between the type of uncertainty and the open character of the plan figure: an uncertain evolution of the surrounding context is addressed by creating a new micro context for the project, an uncertain time frame leads to the creation of a park combined with dynamic urban fields and an uncertain programmatic evolution results in a complete abstraction of the plan figure.

The plain of Mont Jean is an open field next to the airport of Orly in Paris and shared by different small communities: Rungis, Wissous and Fresnes. The dynamic of the airport makes the surrounding context of the plateau volatile and uncertain. The evolution of the airport will certainly influence the larger region by introducing new modes of public transport, new infrastructures, new logistic programs, offices ... but the exact configuration of these evolutions and their impact are uncertain and unknown. Yet the communities surrounding the Mont Jean plain want a clear vision and a spatial strategy for the central open space they share. The plan figure for Mont Jean is the design of an armature for the plain (figure 1). The armature is a stable spatial framework introducing spatial coherence in the dynamic evolution of the area by introducing a new micro context for the plain. This micro context detaches the evolution of the plain from the surrounding uncertain context. The armature is based on a reading of the current quali-

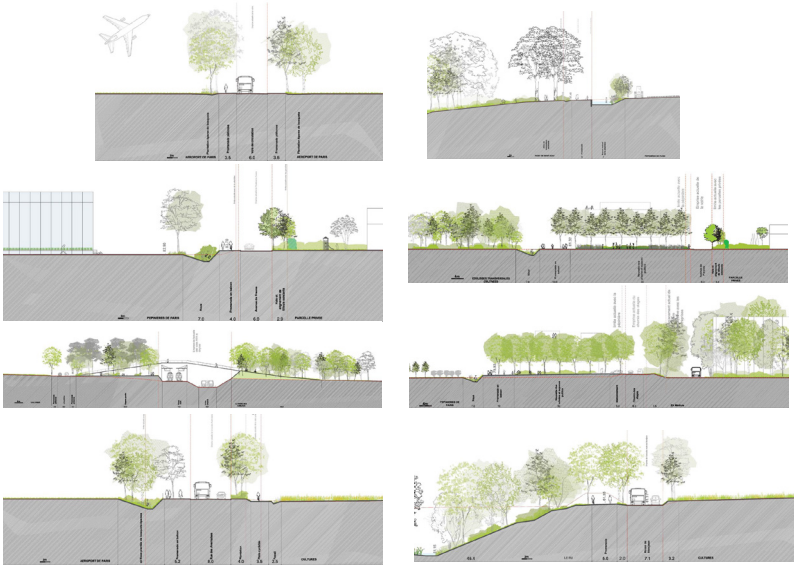


1.The armature as framework for the future evolution of the plain Mont Jean.

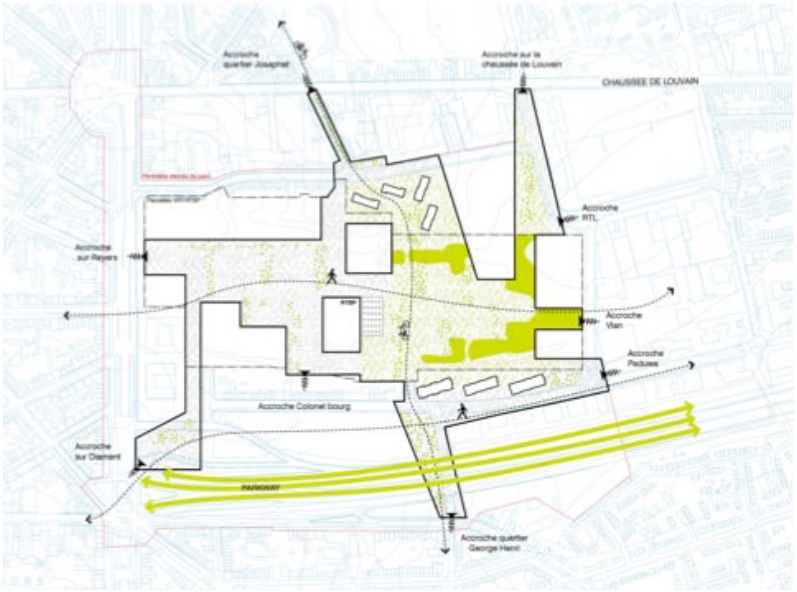
ties and characteristics of the plain. The figure of the armature is based on large-scale elements like the tree nursery of the city of Paris, a castle in ruins in a historic park, the vast perspectives on the surrounding landscape and on the movement of the planes at Orly. But more important for the design of the armature, are the small-scale elements like paths, creeks, a line of trees or a small height differences. These small scale elements are designed in much detail: the changes in topography are studied as a micro topography of which the quality depends on centimetres, the paths are carefully positioned in relation to the creeks or existing lines of trees are completed to frame perspectives (figure 2). The small-scale elements are idiosyncratic to the spatial layout of the plain and to its potential landscape quality. They

are detached from any program, function or economic value. Therefore they can form a stable long-term frame for the evolution of the plain. The plan figure consists of two speeds: the long-term, slow framework and the dynamic fields. The long-term figure is a distorted grid of which the gridlines are determined and designed in detail. A grid in itself is a neutral system, defining fields of which the meaning becomes apparent by their filling in. Furthermore the specific gridlines introduce a distance between the fields allowing a juxtaposition of different functional implementations of the fields. The maximum load of the armatures is tested in different models resulting in some general principles. In this way the dimension and wideness of the plain is guaranteed by concentrating constructions at the edges of the plain. While volumetric compositions have to ensure an indirect relation between the existing villages and the plain in order to give the villages an appearance on the plain.

In a similar way the proposal for the restructuring of the VRT – RTBF (the Belgian state television stations) in Brussels shows a plan figure combining two speeds of evolution. In this case, however, uncertainty is not related to a changing context but to an uncertain time process or even an uncertain program.
The site is situated in the dens urban fabric of Brussels, a fabric that might change in time but not at the scale and the speed of the plain of Mont Jean. The buildings of the VRT and RTBF are outdated and need to be replaced by more functional and compact buildings. The TV stations share a park in the centre of Brussels. However the park is not accessible. As a matter of fact the whole TV site is fenced and functions as a blind spot in the Brussels urban fabric. The ambition is to open up the site, to share the park with the inhabitants and to make the site more diverse by creating a media campus. The ambition to create a media campus is in this case the uncertain factor. In Belgium, TV production -especially in Flanders- is already strongly developed and spread over the whole Flemish region. By consequence the idea of centralizing TV production in Brussels seems improbable. But a new concept of media campus will not only focus on TV but will include different media. This media concept is still uncertain and the implementation in time is unknown. Therefore the plan figure focuses on the ambition on the short term: the position of the two television stations and the idea of the shared park. In the feasibility study the position and the configuration of VRT and RTBF were already decided in the middle of the site. As a result the study presented a park cut in two by the position of both buildings. The plan figure proposed by uapS , on the contrary, is based on the creation a maximum park (figure 3). Therefore the two TV buildings are slightly moved to the



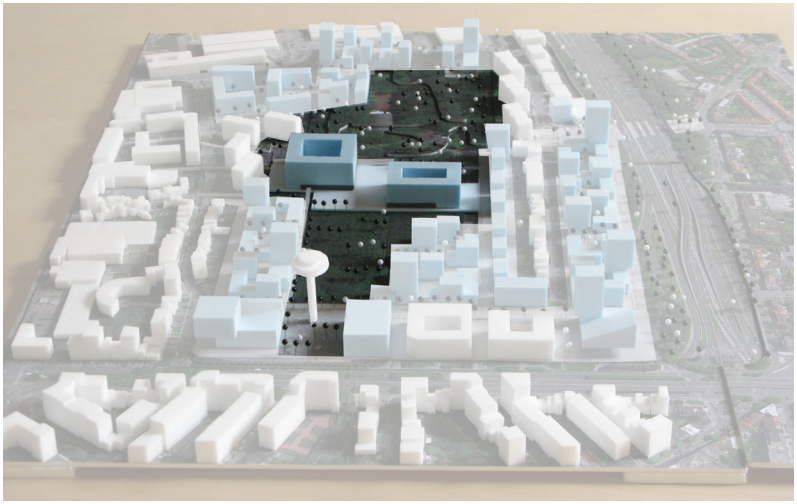
2.The armature designed indetail as a micro context.



3.The maximum park at VRT/RTBF related to the surrounding infrastructure and the neighborhood.

side to create a continuous park. Furthermore the park is not limited to the VRT/ RTBF site but extended into the surrounding infrastructure landscapes. The space of the park is based on the current historical landscape features like the micro topography of the site, the existing trees and the graveyard for the executed of world war two. Special attention is paid to the relation between the park and the neighbourhood in terms of the accessibility and the permeability of the park, taking into account the entrances of the park as articulated points.
The density of programs and volumes is determined by an economic rational. The future constructions in the park will have to finance the construction of the new TV stations. So an economic density is given, a density of buildings of which the program and the volumetric composition is yet unclear. In the plan figure this density is envisaged in urban fields at the edge of the park. In order to guarantee the maximum park an extreme density is needed at the edges of the park. The plan figure defines urban fields to accommodate these densities. The only guideline to accompany the outline of the urban fields is the need for a direct relation between the urban field and the park, by means of perspectives, access and image; a strategy that leaves margin to the types of buildings, the size and their spatial impact all of which depend on the yet unknown programs (figure 4).

In the third case, the plan figure for the PAV project in Geneva, the long- and short-term developments are combined in one figure. In this case there are no recognisable stable elements to frame the dynamic evolution of the project, such as the armatures or the park. The only given in this project is the density economically needed to make the project feasible. As an economic constraint this density remains a number, an abstract given. Tested on site, however, it results in a volumetric composition of high-rise and medium-rise buildings. This inscribes the project in an overall strategy to introduce pockets of high-rise surrounding Geneva's coherent medium high landscape of constructions. As high-rise is exceptional in Geneva it is important to carefully position this high-rise in relation to the current contrast between the medium high skyline of the city and the surrounding Alps. At the same time the initial competition brief asks for a plan figure that avoids presenting the project as a volumetric composition. This means that the desired density cannot be expressed or allocated in a plan figure. Therefore the figure becomes an extreme abstraction of the design objectives. The plan figure is a pointillist representation of the need for a continuous ground floor, the strategic position of commercial functions, the permeability of the site, its connections to the surrounding urban fabric and the strategic position of high-rise buildings (figure 5). As the pointillist image is pixeled



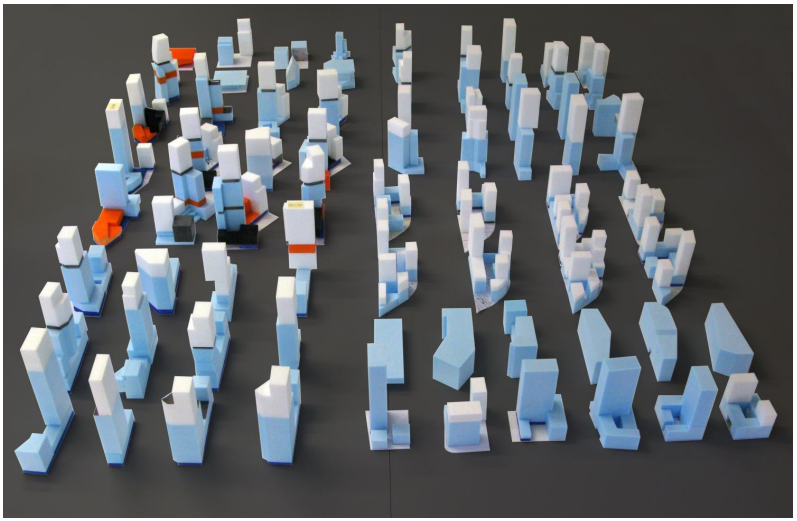
4.The maximum park and the TV stations surrounded by the urban fields.

5.The pixeled plan for the PAV. Geneve showing the main structure aspects without depicting the volumetric or programmatic lay-out.

it blurs the exactness of these objectives, as a result the plan figure only situates or suggests the envisaged interventions, both on the short- and the long term.

Although the plan figures of the cases differ and although they address different contexts of uncertainty the attitude and the approach of the plan figures are common. In general these plan figures work like figures of speech as they work in a non-literal way. Figures are used in such a way that they do not depict but suggest a possible evolution. In other words these plan figures are designs of possibilities, not of solutions (figure 6).
In order to design possibilities without being unconditional or lacking liability, designers need to find ways to express the variable and invariable aspects of a plan by using contrasting expressions. The invariable elements may be drawn as a solution, expressed in detail just as in a conventional plan. However for the variable elements the designer needs to explore a multitude of possibilities. He needs to explore which spatial configurations are acceptable. Therefore the graphics of the plan figures are complemented with models and perspectives demonstrating the qualities and potentials of the uncontrollable and possible evolution of the project. The models allow the designer to explore the overall impact of the abstract notions he introduces on the long term, such as the grid fields in the armatures, the urban fields in the VRT/RTBF project or the possible high rise configurations in Geneva. From the exploration of these possibilities he derives the baselines that allow for variation, dynamics, evolution and change without damaging the invariable elements. He explores how open the plan figure can be for uncertain change.
In all cases the invariable elements of the plan figures are based on a close reading of the site. As everything is undecided, volatile and dynamic, designers need to focus on those aspects that are or can become inert and stable in the long term. Evidently the site itself, or elements of the site -as described in the case of the plain of Mont Jean- are picked up and reinterpreted to construct the stable spatial structure of the plan figure. In this way the site becomes the regulatory aspect of the design . Paraphrasing Robert Smithson's concept of the artist as site seeer and his explorations in New Jersey, the designer becomes a site maker the moment he is a site seeer.

The plan figure: the graphics, models, perspectives, films, texts..., are not the objective or the end product. The plan figure is an instrument in a negotiated urbanism. The tension between the variable and invariable elements can only result into a qualitative realisation by using the plan figure as the basis for discussion with stakeholders. In this way the project evolves by



6.The possible configuration of the high rise in the PAV project.

discussing. The plan figure is only the driving unit of the design process. In a negotiated process of urbanism the plan figure challenges the stakeholders to imagine the future urban evolution of the project. In the discussion the plan figure is constantly changed. This makes the plan figure itself into a dynamic structure of which the final configuration remains uncertain in the design process. Which is evident for the variable elements but also counts to a less extend for the invariables

Ironically the fact that the plan figure functions as a tool of negotiation and discussion; this negotiation tends to reduce the plan figures' innovative and explorative character. The plan figures in the different cases balance between abstract and specific images. The process of negotiated urbanism involves all stakeholders, many of which work outside the design practice. Designers use the abstract and open character of the plan figures to discuss objectives, intentions or structuring elements while most stakeholders need a concrete image of the projected future, an image they can understand and communicate to their public. So in the end the plan figure, its dissension between abstract and concrete, short term and long term, openness and specificity is largely reduced by making the plan figure into a fixed image. The Geneva case is exemplary for this dissension. In the plain Mont Jean and the VRT/RTBF project the plan figure consists of recognisable spatial configurations: the armature and the park. In the Geneva project the initial plan figure

consists of the combination of the pointillist plan of objectives, a multitude of models illustrating the potential of this plan and a series of perspectives that, like in a graphic novel, illustrate the spatial essence of the project in words and images. However in this case the discussion with stakeholders got stuck on the extreme open character of the plan figures. The abstract and interpretative character of the figure is meant to derive the discussion from details like form, material or volumetric composition. All elements that are characteristic to an image: a clear and specific depiction of a future space. Unfortunately most stakeholders prefer images to figures, as images are easier to understand and communicate. Because of the many possibilities of a figure and despite of the multitude of models and perspectives, the use of a figure instead of an image depends too much on the imagination of the participants in the negotiated urban process. So in the end the plan figures risk to be redrawn as images: conventional illustrations of a designed master plan (figure 7-8).

The conflict between figure and image illustrates the fragile character of a negotiated urbanism to address uncertainty in design. The plan figure itself is not the decisive element in the process of urbanisation; the interplay between plan figure and designer, any designer in course of time, is. Using the plan figure the designer imagines the possible future of the territory. He operates as moderator in the stakeholder discussion and is the processor who constantly changes the variable elements according to short-term evolutions. This interaction between plan figure and designer makes the negotiated urban process fragile. If one of both fails the project is reduced to an economic, speculative project reducing the project again to an addition of private initiatives without any coherence. And yet, however fragile, it is this interaction between designer, figure and stakeholders that ensures the flexibility and openness needed to address uncertainty in the design.

1. I prefer to use the non-existent term plan figures instead of plan graphics as plan figures detaches the plan from a purely graphic approach and includes different media such as models, videos, collages...
2. MAROT, S. (2003) Sub-urbanism and the art of memory. London, A.A.
3. REYNOLDS, A. (2003) Robert Smithson. Learning from new Jersey and elsewhere. London, MIT Press

7-8.The evolution from a figure to an image changing the focus of the discussion.